playing only a small part in the matter. Professor Cope and the others who go with him regard use and disuse as the factor of most fundamental importance in producing the variations upon which natural selection can act. The essays of this volume are therefore of great value and full of suggestiveness. They mark a phase in the advance of the evolution problem. They cannot be hurriedly read, but demand careful study on the part of all who wish to comprehend the modern aspects of biological problems. In them every one will perhaps find something with which he will not agree, and many may dispute the general conclusions, but no one can read them without profit. For we must recognize that Professor Cope has attempted to answer a question lying below the law of natural selection. He has attempted to show why variations appear when they are needed and how it is that many animals may vary simultaneously in the same direction. It is hardly time to pass judgment upon his views, but it certainly seems that the observations and suggestions embodied in this book remove many of the difficulties which have been found in the way of the descent theory when viewed from the stand-point of pure Darwinism.

The accompanying plates taken from the book illustrate the remarkable parallelism between genera of different families, called by Professor Cope heterology. Plate XVI. represents five types of the new world Iguanidæ, and Plate XVII. as many of the old world Agamidæ.—*H. W. Conn.*

Geyler and Kinkelin's Pliocene Flora.[1]—Besides the Pliocene deposits of Germany enumerated, 1875, by Sandberger there are two more Pliocene basins,—Hanau-Seligenstadt and Niederrad-Floersheim. The plants of these basins indicate a climate similar to that of the present time and are considered as "Upper Pliocene." About thirty species are described and figured. Of these there are six species identical with recent North American forms, and four extinct species have their nearest relatives among the North American Flora. Six species are recent European forms and seven others are extinct. Seven forms are described as new species; they belong to the genera Pinus, Abies, Fagus, Liquidambar, Rhizomites, and Potamogeton. Several plants, referred to the Oligocene by Ludwig, are Pliocene.

[1] Die Oberpliocaen Flora aus den Baugruben des Klaerbeckens bei Niederrad und der Schleuse bei Hoechst a. M. 47 pages, 4to, 4 plates. By Th. Geyler u. F. Kinkelin. Abhandl. d. Senckenberg. Naturforsch. Gesellsch., 1887.